

-- are in financial straits unless newly built and just getting started. Prices charged by such systems are unlikely to produce sufficient cash flow to justify investments in new technology.

Moving to the "overbuild" standard, which deems a cable operator subject to effective competition if one or more multichannel video programming distributors passes 50% of the franchise area's homes and serves 15%, generally these circumstances do not reflect deployment of advanced technology. TIA has found only one overbuild of the 50 identified by Paul Kagan and Associates<sup>23</sup> where both cable operators have deployed fiber optics. In only seven of the 50 situations has one operator deployed fiber. Given this low rate of fiber deployment in overbuilds to date, any effective competition benchmark would be biased against advanced technology, especially fiber optics.<sup>24</sup>

Past regulated rates. These would not be expected to provide margins for advanced deployment, since the numbers in Part II indicate that relatively higher investments per subscriber are required now for advanced deployment than was true in the past. If it were possible to devise a coefficient relating the growth of rates to upgrades in channel capacity, introduction of two-way capability, and other system technology advances, past rate levels might be usable when multiplied by such a factor. However the benchmark still would reflect essentially a "coaxial" standard of improvement and would not capture the costs and benefits of fiber deployment. Again, it would be more fruitful to work directly on an Advanced Technology Cost-of-Service benchmark.

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<sup>23</sup> Paul Kagan Associates, Cable TV Overbuild Census, Cable TV Franchising Data Roundup, April 30, 1992.

<sup>24</sup> As discussed under the Advanced Technology Cost-of-Service section above, these deficiencies would diminish as more deployment occurred. For the time being, however, it would be more fruitful to give thought to an advanced technology benchmark than to one based on effective competition.

Average rates. As the Commission suggests, the chief attraction of this benchmark is the availability of data, both from the sample of operators responding to the agency's questionnaire in this docket and from other studies such as those conducted by the General Accounting Office. Like the past-rate alternative, however, it cannot be expected to capture rates reflecting recovery of capital expenses for advanced broadband deployment because these instances are still so few.

Eventually, as prices more broadly reflect advanced deployment, an average rate standard would better approximate the incentives required for installing broadband interactive cable networks of fiber and other media. But this process is slower than optimum. Thus, it would be better to develop a benchmark specifically aimed at measuring the capital and operating expenses that must be recoverable if fiber new builds, rebuilds and upgrades are to be encouraged.

Price caps. This benchmark might be useful once initial reasonable price levels are established by some other standard. As discussed above, TIA recommends sustained effort to develop the Advanced Technology Cost-of-Service benchmark. If future advanced deployment is to be recovered in revenues from increased rates, a price cap standard would only serve the purpose if a facilities investment requirement imposed by (or simply accepted by) the franchisor could be treated as a cost beyond the control of the cable operator -- thus allowing the cap to rise.<sup>25</sup> However, rules and practice under price caps as applied to telephone company "exogenous costs," 47 C.F.R. §61.44, would have to be more liberally construed for cable advanced technology mandates.

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<sup>25</sup> For a description of the issue as it has arisen for United Telephone companies required to replace switches in the state-mandated upgrade, "FYI Tennessee," see *Telecommunications Reports*, January 25, 1993, page 25.

#### IV. Conclusion.

For the reasons discussed above, the Commission should design rate regulation to encourage the increasing deployment by the cable industry of technologies, such as optical fiber, which increase channel capacity, reliability and other measures of performance by comparison with coaxial cable. Even as it was writing legislation designed to correct perceived industry excesses in rates and terms of service, Congress clearly applauded the expansion of system capacity and services since the 1984 Cable Act and wished it to continue.

In order not to discourage the continuing deployment of advanced technologies leading to innovative services from the cable industry, the FCC should make clear to franchisors and subscribers the lawfulness of rates recovering cost-justified expenses of installing and rebuilding or upgrading to advanced systems. In particular, flexibility in the setting of cable programming service prices is anticipated in the statute.

Of the benchmarks discussed, TIA endorses -- and will work throughout this proceeding and beyond to assist in developing -- an Advanced Technology Cost-of-Service standard by which the reasonableness of rates for newly-built, rebuilt and upgraded cable system services can be measured.

Respectfully submitted,

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## **APPENDIX A**

### **Demonstration Systems.**

- A. Time Warner (Queens, NY) 1991
  - 1. 150 channel 1 Ghz system fiber serving 500 homes/node
  - 2. PCN test
  - 3. Switched Voice-over-cable test with FPN to 50 homes
  - 4. PPV Movies
  - 5. Narrowcast programming in Chinese, Korean, Israeli, Indian, Greek and Spanish to targeted neighborhoods
  
- B. Time Warner (Rochester, NY) 1992  
77 Channel, 550 Mhz system fiber rebuild capable of 150 channel, 1 Ghz system based on the Queens trial for less than a 15% premium over a fiber upgrade.
  
- C. TCI, US West (Denver, CO) 1992  
Along with AT&T, TCI and US West are trailing Viewer Controlled Cable Television (VCTC) delivering 24 PPV channels and Video on Demand (VOD).
  
- D. TeleWest (U.K.) 1991  
Joint venture between TCI and US West, TeleWest serves 2.9 million subs in England (roughly 30% of all households in the UK) with integrated voice and video service. TeleWest has reached 15% penetration for voice services and 30% for cable television. TeleWest plans to invest 500 million British pounds over the next five years to complete its fiber/coax network.
  
- E. TCI, McCaw Cellular (Ashland, OR) 1992  
The partnership will market trial residential microcellular service in Ashland, OR. McCaw will provide cellular service and TCI will provide the broadband network over fiber optic cables linking (4) cellular antenna sites.
  
- F. Rogers Cablesystems, IBM (Toronto, ONT) 1992
  - 1. Partnering with IBM to provide southern Ontario with 1 Ghz bandwidth to residential and business users. Will service cable television, cellular and data communications traffic.
  - 2. Installing 2 way multipoint to multipoint configurations supporting PCS antenna system serving pedestrian pocket phones.

- G. Apollo CableVision, GTE (Cerritos, CA) 1989  
Fiber to the home demonstration system under special license by the FCC.  
The Cerritos project provides a quality comparison for integrated voice and video services over fiber optics, coax and copper. This service provides 28 PPV channels, interactive home shopping, travel and information services.